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AUTHOR Friedel, Janice Nahra; And Others
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ABSTRACT

In spring 1991, a survey was conducted of 991 community and technical colleges nationwide to determine the extent to which they engaged in environmental scanning (ES) activities. In particular, the study sought to identify those institutions that currently conduct environmental scans; the nature of the links between ES and program development, evaluation, budgeting functions, and strategic planning; the personnel involved in ES; and institutions that could serve as ES resources to other colleges. Study findings, based on a 60.2% response rate, included the following: (1) in response to questions about the nature of the institution's interaction with the outside environment, 60.1% of the respondents indicated that they would "watch out for the likely impact of the environment on the institution"; (2) 41.3% indicated that their college conducts ES; (3) 19.4% of the 350 institutions not currently conducting ES indicated that they expected to initiate ES within the next two years; (4) in ratings of the sophistication of the scanning methods used, only 3.2% of the institutions conducting ES scored the maximum; (5) among institutions conducting ES, 48% reported that the head of institutional research coordinated ES efforts, while 18% cited the chief executive officer; (6) only 8.5% of the institutions conducting ES reported using a specific scanning model; and (7) 55.9% expressed interest in a national ES planning network. Data tables and the survey instrument are included. (PAA)

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A Survey of Environmental Scanning In U.S. Technical and Community Colleges

Janice Nahra Friedel, Ph.D.
Associate Vice Chancellor for Academic Affairs and Planning

Dana Rosenberg Coker, Ph.D.
Institutional Research Specialist

John T. Blong
Chancellor

Eastern Iowa Community College District

306 West River Drive

Davenport, Iowa 52801

(319) 322-5015

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A SURVEY OF ENVIRONMENTAL SCANNING

IN COMMUNITY COLLEGES

ABSTRACT

Environmental scanning has become an increasingly important tool utilized to assist in the planning function of educational institutions. This paper describes the results of a survey of community and technical colleges in the U.S. to determine the extent of environmental scanning practices. The survey was designed to identify those institutions that are currently practicing environmental scanning; the linkage of environmental scanning to program development, evaluation, budgeting functions, and strategic planning; personnel involved; and, institutions that could serve as resources to other colleges developing or expanding their scanning capabilities. The survey was conducted in the spring 1991 of the 991 member institutions of the American Association of Community and Junior Colleges (AACJC). Two hundred forty-eight (41%) respondents indicated that their college conducts environmental scanning; 68 (11%) plan to initiate environmental scanning within the next two years. This report summarizes the results of the survey.

A SURVEY OF ENVIRONMENTAL SCANNING

IN COMMUNITY COLLEGES

I. INTRODUCTION

Community colleges exist in a complex and turbulent environment. The nation is focused on educational accountability, and demands that graduates have the knowledge and skills to move the nation into the twenty-first century. Meanwhile, community colleges face growing enrollments of diverse students--students from varied cultures and personal family situations. Rapid, complex changes in the economy, the workplace, political systems, values, and lifestyles profoundly affect community colleges; many are ill-prepared to respond effectively.

Jeffrey Hallett describes this period as the "PresentFuture": a time of rapid and profound change when the need to respond to the challenges of the future exist in the present. It is crucial that institutions have the capability to analyze these environmental changes and the future in order to develop responsive institutional policies and practices.

Institutional recognition of environmental impact occurs when a process of external scanning and forecasting becomes a central feature of the institutional planning effort. When this is put into practice, an organization can envision its future, define options, and "get out in front" of anticipated environmental changes. Environmental scanning and forecasting is a critical component of successful corporate and non-profit organizational planning. Environmental scanning provides the impetus for decisive action, often giving the organization a "competitive advantage."

Brown and Weiner (1985) described environmental scanning as "a kind of radar to scan the world systematically and signify the new, the unexpected, the major and the minor." Joe Coates (1985) identified the objectives of an environmental scanning system as:

1. To detect scientific, technical, social, and political interactions and other elements important to the institution.
2. To define potential threats, opportunities or changes for the institution by those interactions and elements.
3. To promote a future orientation and management in the institution's leadership.
4. To alert the administration and staff to trends which are converging, diverging, interacting, accelerating, or slowing.

S.C. Jain (1984) has identified four phases in the evolution of environmental scanning in corporations:

1. Primitive Phase--the institution faces the environment as it appears and has exposure to information without purpose and effort; scanning is without impetus.

2. Ad Hoc Phase--the institution watches out for likely impact of the environment on the institution; there is no active search, but the institution is sensitive to information on specific issues; they may scan to enhance understanding of a specific event.
3. Reactive Phase--the institution deals with the environment to protect its future; scanning is an unstructured and random effort with no specific information collected; scanning is done to make appropriate responses to competition and/or markets.
4. Proactive Phase--the institution forecast the environment for desired future; scanning is a structured and deliberate effort to collect specific information using established methodology for analysis. Scanning is done to enable the institution to be on the lookout for its competitive advantage.

The primary purpose of this study was to determine the extent to which environmental scanning is utilized by the nation's junior, technical, and community colleges. For the purpose of this study, environmental scanning is defined as the systematic collection and monitoring of information describing changes in the environment in order to identify and assess emerging developments, trends, and precursor events that may affect the strategic and tactical objectives of an organization.

Purpose of the Study

The purpose of this survey was to determine the extent of environmental scanning practices in community colleges. This survey was designed to identify those institutions that are currently practicing environmental scanning, the linkage of environmental scanning to planning and decision making, personnel involved, and institutions that could serve as resources to other colleges developing or expanding their scanning capabilities.

Preliminary Assessment

An initial assessment was conducted in August 1990 by surveying state offices for community colleges in an attempt to identify community and junior colleges performing environmental scanning. A list of the state offices and the name of a contact person at each office was obtained from the American Association of Community and Junior Colleges (AACJC). The respondents were asked to provide the names of colleges in their state conducting environmental scanning. For those not responding to the written survey, telephone calls were made in order to obtain data. The state offices identified 32 technical and community colleges conducting environmental scanning. The results indicated a lack of understanding regarding environmental scanning; for example, even though a definition was given, several respondents provided the names of individuals working in the area of environmental health and safety.

Whereas the original intent of this assessment was to survey those institutions cited by their state offices as conducting environmental scanning, the researchers noted that the majority of institutions that

have published scans or documents linking environmental scanning with their strategic planning processes were not cited. For this reason, the researchers proceeded with the survey of all AACJC member institutions. This report summarizes the results of the survey conducted of the AACJC members.

II THE STUDY

Target Population. The AACJC membership list consisted of 1,013 community, technical and junior colleges, and university and state systems offices in the United States and its territories, Canada, Central America, and Mexico. An analysis of the list was conducted to eliminate duplicate institutions, resulting in 991 colleges to be surveyed.

Data Collection, Tabulation and Analysis. The survey was mailed on January 16, 1991, to the 991 member institutions of the AACJC. A cover letter and return envelope accompanied the survey; the survey was directed to the chief executive officer for each college or district, and was signed by John T. Blong, Chancellor of the EICCD. A second copy of the survey was mailed on February 19, 1991, to those who did not respond before the stated deadline. A total of 612 (62%) surveys were returned; of these 601 were considered valid for the survey. Two hundred forty-eight (41% of the valid returns) indicated that their college conducts environmental scanning.

All surveys were tabulated and analyzed using the Statistical Package for the Social Sciences (SPSS).

Survey Design

The survey consisted of 27 questions; the first 4 were to be completed by all respondents and requested information regarding the organizational structure and credit enrollment of the responding institution, the institution's current interaction with its external environment, and whether the institution currently conducts environmental scanning as defined on the survey. The remaining 23 questions were to be answered only by those institutions that currently conduct environmental scanning.

Institutions conducting environmental scanning were asked to select responses which describe:

- how scanning is conducted at their institution
- their motivation for scanning
- who is involved in scanning
- the sources that are scanned
- the type of data included in scan documents
- the interpretation, compilation, and reporting of scan information
- how long they have been scanning
- how scanning is coordinated
- how scanning and its products are utilized by the institution

The respondents were also asked to describe the most successful and least successful aspects of environmental scanning and its use at their institution, and whether or not they would want to participate in a network of community, junior and technical colleges that are engaged in environmental scanning. A copy of the survey instrument is given in Appendix A.

III. SURVEY RESULTS

College Organizational Structure. Six hundred one (60.6%) of the 991 AACJC members responded to this survey. Fifty-six percent of these are a single college with one principal site, while only 7% are a multi-college district. The organizational structure of these colleges is shown in Table 1 given below.

Table 1
Organizational Structure of Survey Respondents

	Number	Percent
Single College With One Principal Site	339	56.4
Single College With Multiple Campuses	184	30.6
Multiple College District	42	7.0
Other	33	5.5
Not Given	3	0.5
	601	100.0

Enrollment at the Respondent Institutions. Two hundred forty-seven (41.1%) of the 601 respondents had a full-time equivalent credit enrollment of 500-1,999 during the fall of 1990. Fifty (8.3%) had an FTEE credit enrollment of 10,000 or more. These data are summarized in Table 2.

Table 2
Credit FTEEs for Fall 1990

	Number	Percent
0-499	36	6.0
500-1999	247	41.1
2000-4999	176	29.3
5000-9999	84	14.0
10,000 or more	50	8.3
Not Given	8	1.3
	601	100.0

Interaction With External Environment. The respondents were asked to indicate their type of interaction with the external environment in order to ascertain the level of sophistication of their scanning efforts, and rationale for scanning. The most common method was the informal strategy of watching out for likely impact of the environment on the institution. The second most common approach is to be sensitive to information on specific issues but conducting no broad, active search of the external environment. These data are summarized in Table 3.

Table 3
Interaction of Institutions with External Environment

	Number	Percent
Face the Environment as it Appears	160	26.6
Watch Out for Likely Impact of the Environment on the Institution	361	60.1
Conduct No Search But Are Sensitive to Information on Specific Issues	289	48.1
Conduct Scanning to Enhance Understanding of Specific Events	175	29.1
Conduct Scanning to Make Responses to Competition and/or Markets	182	30.3
Conduct Unstructured and/or Random Efforts With No Specific Information Collection	113	18.8
Deal With Environment to Protect Our Future	191	31.8
Conduct a Structured and Deliberate Effort to Collect Specific Information Using Established Methodology for Analysis	114	19.0
Conduct Strategic Scanning to be on the Lookout for Competitive Advantage	142	23.6
Forecast the Environment for a Desired Future	122	20.3
Did Not Respond	10	1.7

N=601; multiple responses to this item were allowed.

Conducts Environmental Scanning. Two hundred forty-eight (41.3%) of the 601 respondents indicate that they conduct environmental scanning as defined by the following definition: Environmental scanning is the systematic collection and monitoring of information describing changes in the environment in order to identify and assess emerging developments, trends, and precursor events that may affect the strategic and tactical objectives of an organization. These data are summarized in Table 4.

Table 4
Conducts Environmental Scanning

	Number	Percent
Yes	248	41.3
No	350	58.2
No Response	3	0.5
	601	100.0

Institutions Planning to Initiate Environmental Scanning Within the Next Two Years. Those colleges that indicated that they are not currently conducting scanning were asked to indicate if they plan to initiate environmental scanning within the next two years. Sixty-eight (19.4%) of the 350 institutions currently not conducting environmental scanning indicate that they expect to initiate it within the next two years. These data are summarized in Table 5.

Table 5
Institutions Planning to Initiate Environmental Scanning Within the Next Two Years

	Number	Percent
Yes	68	19.4
No	90	25.7
Unsure/Don't Know	166	47.4
No Response	26	7.4
	350	100.0

CHARACTERISTICS OF COLLEGES PLANNING TO INITIATE ENVIRONMENTAL SCANNING WITHIN THE NEXT TWO YEARS

Type of College Organization. An analysis of the responses provided by the 68 colleges that indicated that they expect to initiate environmental scanning within the next two years, indicated that 60% are a single college with one principle site; 31% are a single college with multiple campuses. These data are summarized in Table 6.

Table 6
Organization Structure of Community Colleges Planning to Initiate Scanning Within the Next Two Years

	Number	Percent
Single College With One Principal Site	41	60.3
Single College With Multiple Campuses	21	30.9
Multiple College District	4	5.9
Other	2	2.9
	68	100.0

Fall 1990 Credit FTEE. The majority of community colleges planning to initiate environmental scanning within the next two years had a Fall 1990 FTEE credit enrollment of 500 to 4,999. These data are summarized in Table 7.

Table 7
Fall 1990 FTEEs of Community Colleges That Plan to Initiate Scanning Within the Next Two Years

	Number	Percent
0-499	1	1.5
500-1999	28	41.2
2000-4999	25	36.8
5000-9999	10	14.7
10,000 or more	4	5.9
	68	100.0

CHARACTERISTICS OF COLLEGES THAT CURRENTLY CONDUCT ENVIRONMENTAL SCANNING

Type of College Organization. Of the 248 community colleges that currently conduct scanning, more than half are a single college with one principal site. These data are summarized in Table 8.

Table 8
Organization Structure of Community Colleges That Conduct Scanning

	Number	Percent
Single College With One Principal Site	128	51.6
Single College With Multiple Campuses	85	34.3
Multiple College District	19	7.7
Other	14	5.6
No Response	2	0.8
	248	100.0

Fall 1990 Credit FTEE. Of the schools that currently conduct environmental scanning, over two thirds had a Fall 1990 FTEE ranging from 500 to 4,999. These data are summarized in Table 9.

Table 9
Fall 1990 FTEEs of Community Colleges That Conduct Scanning

	Number	Percent
0-499	8	3.2
500-1999	85	34.2
2000-4999	78	31.5
5000-9999	43	17.3
10,000 or more	29	11.7
No response	5	2.0
	248	100.0

Interaction With External Environment. The 248 colleges that conduct environmental scanning described their most common method of interaction with the external environment as observing for likely impact on the institution, followed by scanning conducted to make appropriate responses to competition and/or markets. These data are summarized in Table 10.

Table 10
The Interaction of Community Colleges That Conduct Scanning With The External Environment

	Number	Percent
Face the Environment as it Appears	40	16.1
Watch Out for Likely Impact of the Environment on the Institution	175	70.6
Conduct No Search But Are Sensitive to Information on Specific Issues	50	20.2
Conduct Scanning to Enhance Understanding of Specific Events	151	60.9
Conduct Scanning to Make Responses to Competition and/or Markets	162	65.3
Conduct Unstructured and/or Random Efforts With No Specific Information Collection	21	8.5
Deal With Environment to Protect Our Future	110	44.4
Conduct a Structured and Deliberate Effort to Collect Specific Information Using Established Methodology for Analysis	93	37.5
Conduct Strategic Scanning to be on the Lookout for Competitive Advantage	123	49.6
Forecast the Environment for a Desired Future	104	41.9

N=248; multiple responses to this item were allowed.

Sophistication of Scanning Efforts

For the purpose of this study, sophistication of scanning efforts is described in terms of the following four variables.

1. The usual method of scanning: Ad hoc studies only, periodically updated studies, or structured system of data collection and processing.
2. The usual motivation for environmental scanning: crisis initiated, decision and issue oriented, or planning process oriented.
3. The usual data included in the scan: retrospective, current, or prospective.
4. The time frame for usage of scanning information: immediate, near-term (one to five years), or long-term future (more than five years).

Sophistication of Scanning College Composites. A composite for each college was developed to determine its relative placement in sophistication of scanning efforts by assigning values ranging from one to three for each of the four sophistication variables. Theses values are illustrated in the matrix given below.

Variable	Value 1	2	3
Usual Method	Ad hoc Studies Only	Periodically Updated Studies	Structured System of Data Collection
Motivation for Scanning	Crisis-initiated	Decision and Issue Oriented	Planning Process Oriented
Data in Scan	Retrospective (past)	Current	Prospective
Time frame for Use of Scan Info.	Immediate	Near-term (1-5 years)	Long-term (>5 years)

Composite scores range from four to 12, with a mean of 9.21 and a median of 10. As Table 11 indicates, only eight (3.2%) of the respondents scored a maximum of 12 (i.e. they utilized a structured system of data collection, their motivation for scanning is process oriented, data in the scan is prospective, and the time frame for use of the scan information is long-term. Forty-nine (19.8%) scored 11. These data are detailed in Table 11.

Table 11
College Composites by Sophistication Variables

Points	Number	Percentage
4	4	1.6
5	5	2.0
6	11	4.4
7	21	8.5
8	25	10.1
9	52	21.0
10	70	28.2
11	49	19.8
12	8	3.2
	3	1.2
	248	100.0

How Scanning Is Conducted. Forty percent of the respondents indicated that scanning at their institution can best be described as periodically updated studies, while 32% indicated that they utilize structured data collection and processing systems. These data are summarized in Table 12.

Table 12
How Scanning Is Conducted

	Number	Percent
Ad Hoc Studies Only	50	20.2
Periodically Updated	100	40.3
Structured Data Collection and Processing Systems	80	32.2
Other	18	7.3
	248	100.0

Motivation For Scanning Activities. One hundred eighty-six (75%) indicated that their motivation for conducting scanning activities is planning-process oriented; only 9 (3.6%) indicated that it is crisis-initiated. These data are summarized in Table 13.

Table 13
Usual Motivation for Scanning

	Number	Percent
Crisis Initiated	9	3.6
Decision and Issue Oriented	53	21.4
Planning Process Oriented	186	75.0
	248	100.0

Type of Data in the Environmental Scan. One hundred forty-six (58.5%) of the respondents indicated that the data included in their environmental scan is principally prospective and provides a forecast of the future; only 20 (8.1%) include principally retrospective data to assess what they have done. These data are summarized in Table 14.

Table 14
Data in the Environmental Scan

	Number	Percent
Retrospective--Assess What Has Been Done	20	8.0
Current--Data for Immediate Use	81	32.7
Prospective--Forecast of the Future	146	58.5
No Response	1	0.8

Time Frame for Decision Making. The vast majority of the respondents (86%) indicated that the environmental scanning information is used principally to guide decisions in the near-term, in the 1- to 5-year time frame. Only about 7% utilize the information to guide decisions beyond five years. These data are summarized in Table 15.

Table 15
Time Frame for Decision Making

	Number	Percent
Immediate	17	6.9
Near-term Future (1-5 years)	213	85.9
Long-term Future (more than 5 years)	17	6.9
No Response	1	0.3
	248	100.0

Beginning Date for Environmental Scanning. The community colleges indicated the year in which they initiated environmental scanning; 50% of the respondents have been conducting scanning activities for five years or less. The peak period for initiation of these activities was 1986-88. These data are summarized in Table 16.

Table 16
Beginning Date for Environmental Scanning

Number of Years Conducting Scanning	Year Started	Number	Percent
Less than 1 year	1991	2	0.8
1 - 5	1986-90	122	49.2
6 - 10	1981-85	61	24.6
11 - 15	1976-80	24	9.7
16 - 20	1971-75	6	2.4
21 - 25	1976-70	7	2.8
26	1966	2	0.8
No Response		24	9.7
		248	100.0

It might be expected that the longer an institution has been conducting environmental scanning; the more sophisticated its environmental scanning systems. The only sophistication measure associated with the length of time scanning has been conducted was the usual method of scanning: those that conduct structured systematic data collection have been conducting scanning for an average of eight years (ranging from 1966 to 1989), while those that principally complete periodically

updated studies have been conducting scanning for an average of five years (ranging from 1970 to 1991). ($F(2,193) = 4.59$, $p<.01$). Those primarily conducting ad hoc studies only have been doing so for an average of six years (ranging from 1970 to 1991).

Coordination of Environmental Scanning Activities. The most common position (48%) coordinating environmental scanning activities is the Director of Institutional Research and/or Planning; the second most common position is that of the chief executive officer (18%). These data are summarized in Table 17.

Table 17
Position That Coordinates Environmental Scanning Activities

	Number	Percent
Chief Executive Officer	45	18.1
Vice President (or Equivalent) for Instruction	18	7.3
Vice President (or Equivalent) for Administration	10	4.0
Vice President (or Equivalent) for Student Development/Services	6	2.4
Director of Institutional Research and/or Planning	119	48.0
Other	49	19.8
No Response	1	0.4
	248	100.0

Twenty-seven (11%) of the total respondents who reported "other" indicated that the person responsible for coordinating environmental scanning activities within their college is a Vice President, Dean, or Director of Planning or Institutional Advancement. Other positions cited included: Vice President (or equivalent) for Institutional Effectiveness or Community Services.

Number of People Involved in Environmental Scanning. Fifty-three (21%) of the respondents indicated that environmental scanning is conducted by one person; 28 of these have responsibility for planning, usually in combination with institutional research and/or development. In 18 cases, the person's title was limited to the areas of institutional research. Other job titles were specific to assessment, institutional advancement, or consultant. In 32 of the 53 institutions in which one person does all environmental scanning, that individual reports directly to the Chief Executive Officer (Chancellor, President, or Superintendent). In most of the other cases, the individual reports to an Executive Vice President, Vice President, or Dean.

As an examination of Table 17 indicates, 89% of the colleges that conduct environmental scanning involve 20 or fewer people; 61% percent involve 5 or fewer people. These data are detailed in Table 18.

Table 18
Number of Individuals Involved in Environmental Scanning

	Number	Percent
1 Person	53	21.4
2-5 People	99	39.9
6-10 People	39	15.7
11-20 People	32	13.0
21-35 People	8	3.2
36-50 People	6	2.4
More than 50 People	9	3.6
No Response	2	0.8

Scanning Participants. Scanning participants represent a broad range of institutional employees. In almost 93% of the responding community colleges, administrators participate in environmental scanning activities; faculty are involved in scanning at 68% of the colleges, followed by professional/technical staff at 55%. These data are summarized in Table 19.

Table 19
Scanning Participants

	Number	Percent
Administrators	230	92.7
Faculty	168	67.7
Professional/Technical Staff	136	54.8
Classified Staff	110	44.4
Governing Board Members	76	30.6
Community Members	74	29.8
Students	65	26.2
Other	18	7.3
No Response	9	3.6

N=248; multiple responses to this item were allowed.

Scanning Sources. The most frequently utilized source for environmental scanning are systems reports, followed by state-wide data bases, labor market assessments, and professional literature. The least utilized sources, as indicated by the respondents, are environmental monitoring publications and classified/help wanted ads in newspapers. These data are summarized in Table 20.

Table 20
Environmental Scan Sources

	Number	Percent
Systems Reports	225	91.5
State-wide data bases	216	87.8
Labor Market Assessments	212	86.2
Professional Literature	192	78.0
Popular Literature	131	53.3
Nation-wide data bases	121	49.2
Sectional Literature Targeted to a Specific Interest or Group	92	37.4
Futurist Literature	90	36.6
Classified/Help Wanted Ads in Newspapers	55	22.4
Environmental Monitoring Publications	40	16.3
Other	58	23.6

N=248; multiple responses to this item were allowed.

Other information sources listed by the respondents included local sources such as newspapers, service agency reports, and planning and development group reports, school systems and city/county data bases; regional planning and reports; United Way's "What Lies Ahead"; internally developed surveys; census reports; university-generated data and data bases; consortia with local area colleges; state university research; and sources from attending national, regional, and state planning sessions.

Scanning Strategies. In addition to scanning, printed and/or electronic information sources, 75% of the respondents indicated that they also conduct locally developed surveys. Sixty-five percent gather data from key informants. Use of additional strategies to scan for information is detailed in Table 21.

Table 21
Scanning Strategies

	Number	Percent
Conduct Focus Groups	113	47.1
Conduct Locally Developed Surveys	180	75.0
Report on Informal Conversations	103	42.9
Gather Data from Key Informants	155	64.6
Other	22	9.2

N=248; multiple responses to this item were allowed.

"Other" strategies include participation in conference and community development meetings; input from college and program advisory committees; organizational connections; formal "think tank" group at the college; and annual surveys conducted of employers of graduates.

Environmental Scanning Model. Only 21 (8.5%) of the respondents indicate that they use a specific model for environmental scanning. Five of these are based on the EdQuest model for strategic planning. These responses are summarized in Table 22.

Table 22
Specific Environmental Scanning Model

	Number	Percent
Utilize a Specific Model	21	8.5
No Model Utilized	220	88.7
No Response	7	2.8
	248	100.0

Interpretation of Raw Data. The respondents were asked to indicate who interprets the raw data collected through environmental scanning for possible implications for the community college. One hundred fifty-seven (63%) indicated that administrators with expertise in the relevant area were involved in such interpretation. In 138 (55%) colleges the individual who collects the raw data also interprets it. These data are summarized in Table 23.

Table 23
Interpretation of Raw Data

	Number	Percent
Collecting Individual Interprets Data	138	55.4
Environmental Scanning Team Members	101	40.6
Relevant Administrators	157	63.1
Relevant Faculty	81	32.5
Other	40	16.1

N=248; multiple responses to this item were allowed.

Sixteen of the 40 respondents who indicated "other" noted that the interpretation of the raw data is completed by a strategic planning committee. Others indicated interpretation by ad hoc advisory committees; the director or staff of the planning and research office; the executive cabinet; or consultants.

Compilation of Information. As indicated by 66% of the respondents, the most common method of compiling scanning information is as a summary of implications. These data are summarized in Table 24.

Table 24
Compilation of Scanning Information

	Number	Percent
A Summary of Each Item or Article	71	29.2
A Composite of Several Similar Items	76	31.3
A Written Scan and Forecast Without Implications	62	25.5
A Summary With Implications	161	66.3
Other	18	7.4

N=248; multiple responses to this item were allowed.

"Other" methods of compiling the environmental scanning information is simply the clipping and sharing of articles; the printing and dissemination of fact sheets or occasional internal reports; the inclusion of an environmental impact section to an ongoing strategic plan; and the writing and dissemination of policy/position documents.

Who Compiles the Scanning Information. In the majority of colleges (58%), the individuals who collect the information are involved in compiling the scanning information, while 48% indicated that administrators with expertise in the relevant area are involved. 32% of the responding institutions indicated that members of environmental scanning teams develop the compilation. These data are summarized in Table 25.

Table 25
Who Compiles the Scanning Information

	Number	Percent
Individual who Collects It	144	59.0
Members of Environmental Scanning Team	80	32.8
Administrators with Expertise in the Area	119	48.8
Faculty with Expertise in the Area	54	22.1
Other	36	14.8

N=248; multiple responses to this item were allowed.

The majority of the respondents who indicated "Other" compiles scanning information, noted that personnel in the Office of Institutional Planning, Research or Development were responsible for the compilation of environmental scanning information. "Other" also included Supervisor of Assessment and Outcomes, Consultants, and College President.

Scan Products. The most common product resulting from environmental scanning activities are printed reports, followed by a data base. These data are summarized in Table 26.

Table 26
Environmental Scan Products

	Number	Percent
Newsletters	37	15.1
Data Base	83	33.9
Formal Printed Reports	182	74.3
Other	79	32.2

N=248; multiple responses to this item were allowed.

"Other" products included sections of various planning documents, internal work papers, "Futuring" sessions, and other informal and formal discussions, sections in research brief or fact book, reports to the Governing Board, memorandums, E-Mail messages, minutes of meetings, specific objectives added to the college plan, series of occasional reports, set of written scenarios, oral reports to planning groups.

Frequency of Communicating Scan Information. How often scan information is communicated varies with 3% of the respondents accomplishing it on a weekly basis and 37% on an annual basis. These data are summarized in Table 27.

Table 27
How Often Scan Information is Communicated

	Number	Percent
Weekly	8	3.2
Bi-Monthly	21	8.5
Semi-Annually	33	13.3
Annually	92	37.1
Other	92	37.1
No Response	2	0.8
	248	100.0

The majority of those who indicated "Other" specified that the scanning information is communicated on an "As Needed" basis, varying by topic and need. Several respondents indicated that the currency of information is of primary importance; one pointed out that in rare instances, the information may need to be communicated on a daily basis. Others indicated that specific information is tied to ongoing program review and evaluation processes, and are tied to 2-5 year cycle. Others indicated that it is done periodically in the context of the planning process.

Uses of Scanning Information. Almost 91% of the respondents indicated that scanning information is utilized for institution-wide planning purposes; 80% utilized the information for program planning and revision purposes. There is some linkage between environmental scanning and staff development efforts, as indicated by 38% of the respondents. The uses of the scanning information by the respondents are summarized in Table 28.

Table 28
Uses of Scanning Information

	Number	Percent
For Discussion Only	44	17.7
To Develop Alternative Future Scenarios	115	46.4
Staff Development Efforts	96	38.7
Program Planning/Revision	200	80.6
Institution-Wide Planning	225	90.7
Decision Making at All Levels	165	66.5
Other	10	4.0

N=248; multiple responses to this item were allowed.

Who Uses Scan Information. While 89% of the respondents indicated that their Chief Executive Officer utilizes scanning information, 92% reported its use by vice presidents (or equivalent). Seventy-three percent of the respondents indicated its use by the planning office, 69% by budget unit heads or other mid-level administrators, and 50% indicated use of the information by faculty. Less than half the respondents indicated use of the information by their governing board. Data regarding who uses the scanning information is summarized in Table 29.

Table 29
Who Uses Scanning Information

	Number	Percent
Vice Presidents (or equivalent)	226	91.9
Chief Executive Officer	219	89.0
Planning Office	180	73.2
Budget Unit Heads or "Mid-Level" Administrators	170	69.1
Faculty	124	50.4
Governing Board	120	48.8
Community Members	36	14.6
Students	29	11.8

N=248; multiple responses to this item were allowed.

Linkages Between Environmental Scanning and Other College Processes. As indicated by 92% of the respondents, the most common link of environmental scanning with other college processes is to short-range planning (one to five years). Eighty-two percent indicated that it is tied to program development, and 72% utilized the information for curriculum revision purposes. Only 26% have linked environmental scanning to performance evaluation. These data are summarized in Table 30.

Table 30
Linkages Between Environmental Scanning and Other College Processes

	Number	Percent
Links to Long-Range Planning (more than 5 years)	111	45.5
Links to Short-Range Planning (1 to 5 years)	225	92.2
Links to Program Development	201	82.4
Links to Curriculum Revision	176	72.1
Links to Budgeting	170	69.7
Links to Performance Evaluation	64	26.2
Links to Budgeting	170	69.7
Links to Performance Evaluation	64	26.2
Links to Other	11	4.5

N=248; multiple responses to this item were allowed.

Two respondents that indicated "Other" specified that environmental scanning is linked to institutional effectiveness and outcomes assessment/evaluation.

Most Successful Aspects of Environmental Scanning and its Uses.

The most successful aspects of environmental scanning at community, technical, and junior colleges, as indicated by the comments written on the surveys are that it facilitates better planning and consensus-building, brings college to the "cutting edge", and involves many persons.

Least Successful Aspects of Environmental Scanning and its Uses.

The least successful aspects of environmental scanning, as indicated by the comments written on the surveys, are:

1. Linking scanning to other college functions, i.e. program and curriculum development/revision; faculty/staff professional development; budgeting and resource allocation; and, outside agencies.
2. Expanding the use of scanning information by college constituencies, faculty, middle managers, senior administrators, and institutional planners.
3. Mobilization of institutional response to projected impact of future trends.
4. Obtaining institutional support for environmental scanning activities .

SUMMARY AND RECOMMENDATIONS

The results of this survey indicate a strong interest on the part of community, technical, and junior colleges in the United States to pursue environmental scanning as a means of keeping abreast of events and trends in the external environment that may impact the institution. Six hundred one (60.6%) of the 991 AACJC members responded to this survey; 248 (41.3%) indicated that they conduct environmental scanning, while 68 (11.3%) indicated that they plan to initiate environmental scanning within the next two years. A variety of scanning strategies are utilized principally by top college administration in institution-wide planning and program planning/revision efforts. The interest in pursuing and/or refining their institution's environmental scanning capabilities is evidenced by the 336 (55.9%) respondents indicating an interest to participate in a national environmental scanning/future planning network. It is recommended that a survey be conducted of these institutions to determine the most important functions that such a network could serve.

BIBLIOGRAPHY

Brown, A., & Weiner, E. (1985). Super managing: How to harness change for personal and organizational success. New York: Mentor.

Coates, J. F. (1985). Scenarios part II: Alternative futures. J.S. Mendell (Ed.), nonextrapolative methods and business forecasting: scenarios, vision, and issue management (pp. 21-46). West Port, CT: Quorum Books.

Coates, J. F. (1986). Issues management: How you can plan, organize and manage for the future. Mt. Airy, MD: Lomond Publications, Inc.

Jain, S. C. (1984). Environmental Scanning in U.S. Corporations.

Mecca, T. V. (1984). The ED QUEST planning model: Applying environmental analysis/forecasting to higher education strategic decision-making. Paper presented at the sixth general assembly of the World Future Society, July 16-20, 1989, Washington, DC.

Mecca, T. V. (1988). Planning resource development in an uncertain future. The D.P. Mitzel (Ed.), Resource development in the two-year college, (239-268). Washington, DC: National Council for Resource Development.

Morrison, J. L. & Held, W. G. (1989). Developing environmental scanning/forecasting systems to augment community college planning. Virginia Community College Association Journal, Spring/Summer, 13-20.

APPENDIX A

Survey Instrument

CLINTON COMMUNITY COLLEGE
SCOTT COMMUNITY COLLEGE
MUSCATINE COMMUNITY COLLEGE

EASTERN IOWA COMMUNITY COLLEGE DISTRICT

DISTRICT OFFICE OF ACADEMIC AFFAIRS AND PLANNING
306 West River Drive • Davenport, Iowa 52801-1221 • (319) 322-5015

ENVIRONMENTAL SCANNING IN COMMUNITY COLLEGES

Environmental Scanning is the systematic collection and monitoring of information describing changes in the environment in order to identify and assess emerging developments, trends, and precursor events that may affect the strategic and tactical objectives of an organization. The purpose of this survey is to identify the environmental scanning activities conducted in community, junior, and technical colleges.

I

(1) 1. Which best describes the organizational structure of your college?
   1. A single college with one principal site
   2. A single college with multiple campuses
   3. A multiple college district
   4. Other (please specify) _____

(2) 2. What was the full time equivalent (FTE) credit enrollment of your college for Fall 1990?
   1. 0 - 499
   2. 500 - 1,999
   3. 2,000 - 4,999
   4. 5,000 - 9,999
   5. 10,000 or more

3. How would you describe your institution's current interaction with its external environment? (circle all that apply)
   (3) 1. We face the environment as it appears.
   (4) 2. We watch out for likely impact of the environment on the institution.
   (5) 3. We conduct no broad active search but are sensitive to information on specific issues.
   (6) 4. We conduct scanning to enhance our understanding of specific events.
   (7) 5. We conduct scanning to make appropriate responses to competition and/or markets.
   (8) 6. We conduct unstructured and/or random efforts with no specific information collection.
   (9) 7. We deal with the environment to protect our future.
   (10) 8. We conduct a structured and deliberate effort to collect specific information using established methodology for analysis.
   (11) 9. We conduct strategic scanning to be on the lookout for competitive advantage.
   (12) 10. We forecast the environment for a desired future.

(13) 4. Does your college conduct environmental scanning as defined in the box above? (circle one)
   1. Yes (proceed to Question 5)
   2. No ---------> If no, do you plan to initiate environmental scanning within the next two years?
      (14) 1. Yes
      2. No
      3. Unsure/don't know

You have completed the survey. Please return it in the envelope provided. Thank you for your cooperation.

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(15) 5. Which of the following **best** describes how scanning is conducted at your institution? (circle one)
1. Ad hoc studies only (e.g., studies in response to specific events or issues)
2. Periodically updated studies (e.g., labor market assessments targeted at specific occupations)
3. Structured data collection and processing systems
4. Other (please specify) _____

(16) 6. The motivation for our scanning activities is **usually** (circle one):
1. Crisis initiated
2. Decision and issue oriented
3. Planning process oriented

(17) 7. The data included in the environmental scan are **usually** (circle one):
1. Retrospective - a means to assess what we have done
2. Current - data for immediate use
3. Prospective - forecast of the future

(18) 9. The environmental scanning information is used **principally** to guide decisions in what time frame (circle one):
1. Immediate
2. Near-term future (1-5 years)
3. Long-term future (more than 5 years)

(19-22) 10. In what year did the college start environmental scanning? _____

(23) 11. What office or position coordinates and/or directs the environmental scanning activities? (circle one)
1. Chief Executive Officer
2. Vice President (or equivalent) for Instruction
3. Vice President (or equivalent) for Administration
4. Vice President (or equivalent) for Student Development/Services
5. Director of Institutional Research and/or Planning
6. Other (please specify) _____

(24) 12. How many individuals are directly involved in environmental scanning?
1. One person does it all
What is the title of this person? _____
To what position does this person report? _____
2. 2 - 5 people
3. 6 - 10 people
4. 11 - 20 people
5. 21 - 35 people
6. 36 - 50 people
7. More than 50 people

13. Who participates in the scanning? (circle all that apply, and indicate how many of each group participate.)

	Group	Number
(25-27)	1. Administrators	_____
(28-30)	2. Faculty	_____
(31-33)	3. Classified staff	_____
(34-36)	4. Professional/Technical Staff	_____
(37-39)	5. Students	_____
(40-42)	6. Governing board members	_____
(43-45)	7. Community members	_____
	8. Others (please specify)	
	_____	_____
	_____	_____

14. What kinds of printed and/or electronic information sources are scanned? (circle all that apply)

(46) 1. Labor market assessments
(47) 2. Classified/help wanted ads in newspapers
(48) 3. State-wide data bases
(49) 4. Nation-wide data bases
(50) 5. Professional literature (e.g., Chronicle of Higher Education, journals, newsletters, research reports, etc.)
(51) 6. Popular literature (e.g., newspapers, Newsweek, Time, etc.)
(52) 7. Sectional literature targeted to a specific interest or group (e.g., Business Week, Working Woman, Computer World, etc.)
(53) 8. Environmental monitoring publications (World Watch, etc.)
(54) 9. Futurist literature (The Futurist, Future Survey, What's Next, etc.)
(55) 10. Systems reports (college, state departments and governmental agencies, higher education reports, etc.)
(56) 11. Other (please specify) _____

15. What additional strategies are used to scan for information? (circle all that apply)

(57) 1. Conducting focus groups
(58) 2. Conducting locally developed surveys
(59) 3. Reporting on informal conversations
(60) 4. Gathering data from key informants
(61) 5. Other (please specify) _____

(62) 16. Do you utilize a specific model for environmental scanning (e.g., the EDQUEST model for strategic planning)?

(63-72) 1. Yes -----> if yes, please specify _____
2. No

(11) 17. Who interprets the raw data for possible implications for the community college? (circle all that apply)

(1) 1. The individual who collects it
(2) 2. Members of environmental scanning team(s)
(3) 3. Administrators with expertise in the relevant area
(4) 4. Faculty with expertise in the relevant area
(5) 5. Other (please specify) _____

18. How is the information compiled? (circle all that apply)

(6) 1. As a summary of each item or article
(7) 2. As a composite of several similar items
(8) 3. As a written scan and forecast without implications
(9) 4. As a summary with implications
(10) 5. Other (please specify) _____

19. By whom is the information compiled? (circle all that apply)

(11) 1. The individual who collects it
(12) 2. Members of environmental scanning team(s)
(13) 3. Administrators with expertise in the relevant area
(14) 4. Faculty with expertise in the relevant area
(15) 5. Other (please specify) _____

20. What kinds of products result from the scan? (circle all that apply)

(16) 1. Newsletter
(17) 2. Data base
(18) 3. Formal printed report
(19) 4. Other (please specify) _____

(20) 21. How often is scan information communicated?

1. Weekly
2. Monthly
3. Semi-annually
4. Annually
5. Other (please specify) _____

22. How is the information used in the college? (circle all that apply)

(21)** 1. For discussion only
(22) 2. To develop alternative futures scenarios
(23) 3. In staff development efforts
(24) 4. For program planning/revision purposes
(25) 5. For institution-wide planning purposes
(26) 6. For decision-making at all levels
(27) 7. Other (please specify) _____

23. Who uses the scanning information? (circle all that apply)

(28) 1. Governing Board
(29) 2. Chief Executive Officer
(30) 3. Vice Presidents (or equivalent)
(31) 4. Budget unit heads or other "mid level" administrators
(32) 5. Planning Office
(33) 6. Faculty
(34) 7. Students
(35) 8. Community members

24. Are there links between the environmental scanning process and planning, program development, evaluation, and/or budgeting functions? (circle all that apply)

(36) 1. Links to long-range planning (more than 5 years)
(37) 2. Links to short-range planning (1 - 5 years)
(38) 3. Links to program development
(39) 4. Links to curriculum revision
(40) 5. Links to budgeting
(41) 6. Links to performance evaluation
(42) 7. Other (please specify) _____

25. Please describe the **most** successful aspect of environmental scanning and its use in your college.

26. Please describe the **least** successful aspect of environmental scanning and its use in your college. How would you improve this function?

27. As part of this project, we plan to develop a network of community, junior, and technical colleges that are engaged in environmental scanning. We would appreciate it if you would give your name and address for this purpose in the space below.

College _____

Address _____

City _____ State _____ Zip _____

Person responding to the survey _____

Title _____

Phone number (___) _____

___ Please check here if you wish to receive a copy of the results of this survey.

THANK YOU. Please return the survey in the postage paid envelope to the Eastern Iowa Community College District, 306 West River Drive, Davenport, IA 52801-1221.

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ERIC Clearinghouse for Junior Colleges

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